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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,198

08/30/2006

Dieter Groezinger

VMP-40009

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08/05/2008

PYLE & PIONTEK

ATTN: THOMAS R. VIGIL

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CHICAGO, IL 60601

EXAMINER

LIN, KUANG Y

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

08/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,198	Applicant(s) GROEZINGER, DIETER	
	Examiner Kuang Y. Lin	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support in the specification as originally filed for the claimed feature that "the soluble salts are **sintered and compressed** at approximately 200 degree C"

3. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the statement of "binder is ---- a mixture of inorganic phosphates with a fraction of between 0.5 and 10 by wt% of said mixture" is deemed to be vague and indefinite. Since "said mixture" is referred to "a mixture of water soluble salts and binder", it is not clear how the binder composition can be defined as a mixture of water soluble salts and binder itself.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over SU 1,196,096 and further in view of US 2,878,539 to Halpern et al.

SU '096 substantially shows the invention as claimed except that it does not disclose to make the compact pressure and use graphite parting agent.

However, it is conventional to use a compact molding machine or pressure blowing machine for pressuring the foundry mixture during core making process.

Thus, it would have been obvious to use a compact molding machine or pressure blowing machine for forming core of SU '096 in view of the conventional practice.

Further, Halpern et al. show that it is conventional to incorporate graphite as parting agent in the mold mixture to facilitate the foundry process. It would have been obvious to incorporate graphite in the mold mixture of SU '096 in view of the advantage. With respect to claim 2, it is conventional to add borate into phosphate binder for making foundry core (see, for example, US 5,573,055 to Melling et al.) With respect to claim 3, it is also conventional to add parting agent into the foundry mixture to facilitate core removal process. With respect to claims 4 and 5, it is conventional to make the phosphate binder from aluminum phosphate, boron phosphate, etc. (see, for example, DE 10,065,075 or US 5,262,100 to Moore et al. (col. 7, line 32)).

6. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,764,575 to Anderko et al. and further in view of US 5,573,055 to Melling et al. and US 2,878,539 to Halpern et al.

Anderko substantially shows the invention as claimed except that it use resin, instead of phosphate, as a binder and does not disclose the use of graphite parting agent. However, Melling shows to use phosphate and/or borate as a binder to avoid the use of any organic materials which would volatilize or burn out when the mold is heated at high temperatures (see, for example, col. 4, lines 4-7). It would have been obvious to use the phosphate and borate binder of Melling in the water soluble salt core of Anderko in view of the advantage. Further, Halpern et al. show that it is conventional to incorporate graphite as parting agent in the mold mixture to facilitate the foundry process. It would have been obvious to incorporate graphite in the mold mixture of Anderko et al. in view of the advantage. With respect to claim 3, it is also conventional to add parting agent into the foundry mixture to facilitate core removal process. With respect to claims 4 and 5, it is conventional to make the phosphate binder from aluminum phosphate, boron phosphate, etc. (see, for example, DE 10,065,075 or US 5,262,100 to Moore et al. (col. 7, line 32)).

7. Applicant's arguments filed July 1, 2008 have been fully considered but they are not persuasive.

a. Applicant in page 4, last para. through page 5, 2nd para. of the response stated that neither SU '096 nor Anderko et al. shows the claimed process of compressing and sintering step. However, it is conventionally use HIP (hot isostatic pressuring) process during sinter of particulate material to reduce the porosity in the sintered article (see, for example, US 5,865,912 to Morimoto et al.,

col. 5, line 66 through col. 6, line 9). Further, it is noted that there is no support in the specification as originally filed for the claimed feature of compressing during sintering step. Furthermore, it is noted that claims 1-7 are in a product-by-process format. The water soluble salt core of SU '096 or Anderko et al. appears to be the same or similar to that of prior art. See MPEP 2113.

b. Applicant in page 5, 1st para. of the response stated that the claimed water soluble core was sintered at approximately 200 degrees and heated to under 700 degree C. Applicant further stated that none of the prior art process includes these process steps. However, it is noted that claims 1-7 are in a product-by-process format. The soluble core of SU '096 is also heated to 300 degree C. Thus, the claimed product appears to be the same or similar to that of prior art. See MPEP 2113. The soluble core of Anderko et al, as modified by Melling et al. is also heated to 350 degree C (Melling et al. also heats the core at 350 degree C, see col. 3, lines 56-60). Again, the claimed product appears to be the same or similar to that of the prior art.

c. Applicant in page 5, 3rd para. of the response stated that claim 1 is carried out without being subject to outgassing. Again, claims 1-7 are in a product-by-process format. The water soluble salt core of SU '096 or Anderko et al. appears to be the same or similar to that of prior art. See MPEP 2113.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 571-272-1179. The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jessica L. Ward can be reached on 571-272-1223. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kuang Y. Lin/
Primary Examiner, Art Unit 1793

8-1-08